NATIOAL BRIDGE INSPECTION STANDARDS
Advance Notice of proposed rulemaking (ANPRM); request for comments

[FHWA Docket No. FHWA-2001-8954]
RIN 2125-AE86

Comments by Harry Capers Jr.
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We have the following comments on the proposed rulemaking:

APPLICATION OF STANDARDS

Should the FHWA develop its own definition of a bridge for the purpose of inspection and reporting?

The current definition is acceptable.

Should the FHWA definition change the way the bridge length is determined or what the minimum bridge length should be for reporting purposes?

No. The current system works well. However, the length should be 20 ft. and greater.

What impact will the possible inclusion of more bridges be (1) on public authorities complying with this as a NBIS requirement, (2) or on the FHWA which maintains the inventory, (3) or on the HBRRP funds?

The inclusion of additional bridges below 20 ft. will increase the cost of the NBIS program, to a significant extent. Although the additional expenditure would result in a safer highway system, we do not consider the risk to motorists of small bridge failures to be as great as for the failure of larger bridges. Considering that the funds to inspect these small bridges will be drawn from HBRRP, the cost to inspect will result in less funding for repair or replacement of the larger bridges.

INSPECION PROCEDURES

What impact will changing the underwater inspection intervals have on public authorities complying with this as an NBIS requirement?

Although the existing 5-year underwater inspection interval is adequate, we recommend a 4-year underwater inspection frequency to correlate with the regular NBIS inspection. This would allow the States to perform complete inspections, both structural and underwater, at the same time.

What, if any, would be the impact on public authorities complying with evaluation of scour at bridges criteria within the NBIS regulations?

We agree that the evaluation of scour at bridges should be included in the NBIS regulation. Since all authorities are already required to perform the scour evaluations, there should be no major impact.

FREQUENCY OF INSPECTIONS

Should the 4-year interval be increased so that more bridges would be eligible for the extended inspection cycle?

New Jersey does not utilize the extended cycle. Therefore, we have no comment on increasing the current maximum interval of four years with FHWA approval.

What would be a reasonable interval?

Since we do not use the extended cycle, we have no comment regarding an appropriate extended interval.

What impact would this have on the safety of bridges?

Any increase in inspection frequency will increase risks because deterioration can occur by means other than due to normal aging (vehicle impacts, floods, etc.). However, for some structures, an extended interval entails very little risk and can significantly reduce the inspection costs and increase the efficiency of available inspection personnel. An intelligent informed decision by the State, with concurrence of the FHWA, on the appropriate cycle for a bridge is appropriate.

QUALIFICATION OF PERSONNEL

Should the individual in charge of the inspection and reporting who is a PE be required to have the same training as bridge inspectors and have additional experience in bridge inspections?

Yes, the individual in charge of inspection and reporting should have the same training as bridge inspectors regardless of whether or not they have a PE.

Should the NBIS regulation be more specific as to the discipline of the professional engineer responsible for these bridge inspections and what impact would this change have on public authorities complying with this?

The head of the Unit should be a Structural Engineer with training and experience in the field of bridge inspections, utilizing staff without bridge inspection experience and adequate training would be a serious mistake. All members of the inspection team should have received NBIS training.

Bridge engineers have indicated that inspection programs need to include an engineer in training (EIT) component. Bridge engineers feel that a graduate EIT engineer should qualify as a field team leader with appropriate bridge inspector's training and a minimum of 2 years bridge design, inspection or construction experience.

As proposed, we would disagree. We do not consider it appropriate for a graduate EIT engineer (who does not need to be a Civil or Structural Engineer) to head an inspection team without specifically having the bridge inspection experience. Further, we feel that a minimum of five years of bridge inspection experience should be required for team leaders.

According to NBIS, a bridge inspector (Unit Leader or individual in a responsible capacity) must have a minimum of 10 years experience in bridge inspection assignments in a responsible capacity. Bridge engineers would like clarification of the phase "in a responsible capacity."

Although the phrase has caused some confusion, it has not resulted in any serious difficulty in New Jersey. This term is similar to what is used in determining experience for qualification as a Professional Engineer, so it is not utilized solely for NBIS. Therefore, we feel that clarification may be difficult, but we would not object to it provided it does not unduly restrict the qualifications for the Unit Leader or Team Leader. Since considerable changes have taken place to NBIS since 1988, we would recommend limiting the experience to 10 years "during the last 15 years" to assure recent not archaic experience. Similarly, for the team leader the minimum experience required should be 5 years during the last 8 years. The other 3 years should be bridge design and/or bridge inspection experience.

What impact would modifying the training requirements for inspectors have on public authorities complying with this as an NBIS requirement?

Providing more training or experience in proportion to the complexity of the structure being would be very difficult to administer. New Jersey primarily uses consultants to inspect complex structures and the selection process for these consultants considers experience inspecting similar complex structures. If the requirement for training courses is added, it will require the State to make the training courses available to various consultants so that they could qualify to compete for this type of work. We have found that it is difficult to provide the presently required training courses in sufficient frequency to satisfy the consultant community. If the requirement for other training courses (movable bridges, FCM, special structure types, etc.) is added, this will make our job more difficult without necessarily providing any corresponding increases in quality.

Should those performing underwater inspections be qualified licensed professional engineers?

Licensed professional engineers that are also qualified divers are a rare commodity, especially when divers whose only qualification is based on recreational diver training are discounted. This fact makes it difficult to limit the divers to Civil or Structural Engineers, let alone professional engineers. New Jersey mandates that a qualified Team Leader be present during the diving inspection. This means that a commercial diver (non-engineer) can be used provided a qualified Team Leader is present. Since commercial divers are trained to inspect infrastructure underwater, we do not feel that this limits the effectiveness of the inspection process.

INSPECTION REPORT

What, if any, would the impact be on public authorities complying with only allowing the inspector who was out in the field to change the inspection report as an NBIS requirement?

New Jersey performs Quality Control and Quality Assurance reviews of all bridge inspection reports. These reviews often result in changes to the inspection reports. However, we do not believe that unilateral changes to the reports should be made by office staff that was not present in the field. The changes, if needed, should be based on collaboration between the various staff including the field inspector. However, codifying this rule would cause a problem when the individual who inspected the bridge is no longer with the organization at the time errors in the report are identified. Any change that is supported clearly by the field notes, sketches and photos and impacts the condition rating of the deck, superstructure, substructure, etc. could be changed without the inspector being present.

INVENTORY

Should the reporting requirements for the NBIS be changed and what, if any, would the impact be on public authorities complying with this?

Inventory data reporting requirements are working well and we do not see any need to facilitate a change at this time.

Also, our responses to the "Additional General Questions" are as follows:

1. *Does the current regulation at 23 CFR part 650, subpart C, correctly address the requirements of 23 USCV 151, national bridge inspection program?*

   YES

2. *What improvement would you recommend to the bridge inspection procedures?*

   NONE

3. *What specific procedures would you recommend to enhance the NBIS regulations?*

   NONE

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